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AIR EDUCATION AND TRAINING
COMMAND**



AIR FORCE INSTRUCTION 21-101

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Maintenance

**AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT (F-35)**

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This addendum complements AFI 21-101, *Aircraft and Equipment Maintenance Management*. It prescribes policies and procedures governing aerospace equipment maintenance management of F-35 aircraft for Air Education and Training Command (AETC). Chapters align with AFI 21-101. A reference at the end of a paragraph directs users to the appropriate AFI 21-101 parent guidance, if applicable. Chapters 12, 13 and 14 of AFI 21-101 do not require supplementation for the F-35 and therefore, are omitted from this publication. This publication does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC) and their units. Refer recommended changes about this publication to the Office of Primary Responsibility (OPR) using AETC Form 1236, *Request for Improving/Changing AETC Maintenance Publications*. Recommended changes must be approved by the group commander (or squadron commander, if not assigned to a group) before forwarding to HQ AETC/A4M, for action by HQ AETC/A4MMP. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). This publication may be supplemented at the group/director level. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier

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SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Specific F-35 policy is revised to align with the revision of AFI 21-101. Action request process is expanded to provide additional submission guidance. Flying Scheduling Effectiveness guidance has been added.

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Chapter 1

MANAGEMENT PHILOSOPHY AND POLICY

1.1. Introduction

1.1.1. Sustainment Operating Instructions (SOIs) are F-35 joint program instructions provided by the Joint Program Office (JPO). They are developed with Service/Partner participation and provide source documentation for Air Force policies/instructions specific to the F-35 where legacy instructions may not be adequate for the given topic. SOIs are considered applicable and source guidance for use when there is no other Air Force guidance available. If there is a conflict, Air Force guidance will take precedence. SOI source documentation/information that is relevant to AFI 21-101 is included in this publication and referenced to the specific SOI in applicable paragraphs of this publication. SOIs may be accessed at the following web site: <https://cs1.eis.af.mil/sites/f35/sustainment/AF%20SOI%20Library/Forms/AllItems.aspx?RootFolder=%2fsites%2ff35%2fsustainment%2fAF%20SOI%20Library%2fUSAF%20SOI%20Final%20Folder&FolderCTID=&View=%7b372D2765%2d387F%2d47DE%2dA9E7%2d27F37190DE2C%7d>

1.1.2. The F-35 is a unique joint services platform that utilizes terminology that differs from legacy. For a frame of reference, the following are common terms (not all inclusive) and their legacy equivalent: ALIS=IMDS, JTD=MDS TO, TCTD=TCTO, AR=107 request or ETAR, MEFL=MESL and LCN=WUC.

1.2. Maintenance Concept

1.2.1. Action Requests (AR) are the primary method of problem reporting for the F-35 Air System. Refer to **Paragraph 11.10** to submit ARs to the Autonomic Logistics Global Sustainment (ALGS) Operations Center through ALIS. SOI 1514.02. (AFI 21-101, Paragraph 1.3.3)

1.2.2. Prognostic Maintenance Inspections.

1.2.2.1. Prognostic Maintenance Inspections are based on life limits typically assigned to specific PN/SNs. These inspections are heavily dependent on Prognostics and Health Management (PHM) and will be viewable and tracked in the same manner as scheduled maintenance inspections. **(T-2)**.

1.2.3. O+ Maintenance. SOI 1505.06.

1.2.3.1. The F-35 Joint Program employs a 2 level maintenance concept defined as organizational and depot levels of maintenance. Within the Organizational level, there are on- aircraft and O+ maintenance tasks.

1.2.3.2. O+ Scheduled Maintenance:

1.2.3.2.1. Scheduled maintenance requirements for off equipment will be listed within applicable JTD. **(T-2)**.

1.2.3.2.2. O+ scheduled maintenance can be documented and tracked for particular assets as detailed below:

1.2.3.2.2.1. Support Equipment (SE) scheduled maintenance will be managed, tracked and documented within Computerized Maintenance Management System (CMMS). **(T-2)**.

1.2.3.2.2.2. Alternate Mission Equipment (AME) scheduled maintenance will be documented, tracked and managed within CMMS. **(T-2)**.

1.2.3.2.2.3. O+ propulsion maintenance will be documented, tracked and managed using the Propulsion Workstation, as applicable. **(T-2)**.

1.2.3.2.3. Scheduled maintenance tracking of parts not specified above are not tracked within CMMS/SHM. Tracking and managing of scheduled inspections/shelf life of these same items while they are not installed on an Air Vehicle (AV) will be tracked in either Supply Chain Management (SCM) as a shelf life tracked item or external to ALIS (i.e., AFTO Form 95). **(T-2)**. For example, the tracking of a 90-day charge life of a battery required to be in a Ready For Issue condition (while it is not installed on an AV) is not tracked within CMMS/SHM.

1.3. Aircraft and Equipment Readiness

1.3.1. Management of all F-35 Air Vehicle (AV) Scheduled and Prognostic maintenance requirements are performed within the Autonomic Logistics Information System (ALIS). Scheduled and Prognostic maintenance is performed IAW Joint Technical Data (JTD), Time Compliance Technical Directive (TCTD) and as directed in an Action Request Response (ARR). Specific scheduled maintenance requirements are created by using the Health Inspection Task (HIT) in Squadron Health Management (SHM) via ALIS. (AFI 21-101, Paragraph 1.5)

1.4. Use of Joint Technical Directives (JTD). Verified JTD will be used for all maintenance actions/procedures. **(T-2)**. Where there is JTD that has not been authored or verified, refer to established procedures. SOI 1511.01 and 1514.02. (AFI 21-101, Paragraph 1.7.)

1.4.1. Lockheed Martin (LM) Aeronautics is the Joint-Service Technical data Manager (LM-JSTDM) and has management responsibility for all JSF program technical data and technical data requirements. LM-JTDM provides overall management of the JTDAR internal process and updates required for all JSF JTD. The PSC is responsible for all propulsion system JTD and manages PSC JTDARs in the same manner as LM-JTDM for updates on all PSC JTD. SOI 1511.01.

1.4.1.1. Recommend improvements, corrections or additions to JTD by submitting a Joint Technical Data Action Request (JTDAR) to ALGS Operations Center through ALIS for JTD improvements, corrections or additions. **(T-2)**. The request should be clear, concise and provide enough detail to identify the recommendation. Additionally, the request should provide a recommended solution if known. The initiator shall recommend a JTDAR processing priority of Routine or Expedited Action as applicable.

1.4.1.2. Expedited JTDAR are accomplished when personnel/property hazards, safety-of-flight conditions exist or a change that pertains to a procedure that will result in a work stoppage or damage to equipment if left uncorrected.

1.4.1.3. Routine JTDAR are accomplished for all other changes that do not meet the Expedited Action criteria.

1.4.2. Waivers, deviations, improvements, corrections, or additional technical data procedures are submitted using an AR to the ALGS Operations Center through ALIS. **(T-2)**. SOI 1514.02.

1.4.3. Support Equipment Maintenance Matrix (SEMM). SOI 1508.09.

1.4.3.1. The primary source for technical data used by authorized personnel to conduct maintenance for SE is verified JTD. In the absence of verified JTD, legacy general tech data may be used.

1.4.3.2. The SEMMs identify the approved technical data that is to be used for a given SE maintenance task. The SEMMs do not contain SE operational tasks, procedures, or documentation. The SEMMs only contain SE maintenance and repair tasks and related documentation.

1.4.3.3. The SEMMs are standalone, Air System Contractor (ASC) configuration-managed, protected Microsoft Excel files intended to be used as cross reference tools for SE authorized persons to assist in determining whether or not a particular SE maintenance task is authorized (when no released/verified JTD is available).

1.4.3.3.1. The referenced SE maintenance technical data in the SEMM is comprised of Original Equipment Manufacturer (OEM) and/or vendor Operation & Maintenance (O&M) manuals, Department of Defense (DoD) Service SE technical publications and ASC-authored work cards.

1.4.3.4. If SE JTD data modules exist, the authorized person identifies whether it is Verified or Unverified. **(T-2)**.

1.4.3.4.1. If SE JTD modules are available, but are identified as “Unverified,” the authorized person shall follow procedures outlined in SOI 1511.01. **(T-2)**.

1.4.3.4.2. If SE JTD modules are available and identified as “Verified,” the authorized person shall perform maintenance in accordance with the instructions, and then close the work order. **(T-2)**.

1.4.3.5. If no SE JTD is authored the authorized person selects the applicable Unscheduled or Preventative Maintenance SEMM. **(T-2)**.

1.4.3.6. If the authorized person identifies a discrepancy (e.g., does not find a task and applicable reference) in the Unscheduled and/or Preventative SEMM, he/she shall submit an AR and follow instructions as detailed in the ARR. **(T-2)**.

1.5. Modification Management. Submit an AR to the ALGS Operations Center through ALIS for program specific equipment and aircraft modifications. SOI 1514.02. (AFI 21-101, Paragraph 1.11)

Chapter 2

GENERAL RESPONSIBILITIES FOR COMMANDERS AND KEY LEADERS

2.1. Maintenance Group Commander Responsibilities

2.1.1. Identify shortfalls of critical equipment needed for essential maintenance assets to include aircraft, engines, pods, AGE, vehicles, etc., and engage with the MAJCOM and/or Lightning Support Team (LST) to mitigate. (AFI 21-101, Paragraph 2.4.15.)

2.1.2. Engine trending data is managed by Pratt & Whitney (P&W) service engineers. (AFI 21-101, Paragraph 2.4.18.)

2.1.3. Stock Record Account Number (SRAN) engine manager duties are performed by the contractor. (AFI 21-101, Paragraph 2.4.33.)

2.1.4. Engine Health Management Plus (EHM+) duties are performed by the contractor. (AFI 21-101, Paragraph 2.4.34.)

2.1.5. Wing Aircraft Structural Integrity Program (ASIP) and the Individual Aircraft Tracking (IAT) portion of ASIP are an integrated function within the ALIS and the aircrew debriefing process. There is no maintenance intervention in the ASIP/IAT data collection or reporting of quarterly data to the MAJCOM at this time. The MXG/CC will appoint a project officer for ASIP functions when required per the program master plan. **(T-2)**. (AFI 21-101, Paragraph 2.4.38.)

2.1.6. The Operating Unit/Squadron are required to report mishaps/accidents in accordance with existing Service procedures and instructions and are also responsible for contacting the ALGS Ops Center in accordance with the F-35 Mishap Communication Instruction. Operating Unit/Squadron policy will determine individuals or positions that will notify the ALGS Ops Center in the event of a mishap/accident. **(T-2)**. SOI 1505.01. (AFI 21-101, AETC Sup, Paragraph 2.4.58.)

2.2. Wing Weapons Manager (WWM)

2.2.1. Ensure an AR is submitted for weapons SE requiring repair when procedures are not established. (AFI 21-101, Paragraph 2.7.29)

2.2.2. Ensure JPO provided weapons load crew CTK contents meet production contract procurement requirements. WWM may modify CTKs providing an AR is submitted to JPO to approve the weapons load crew CTK contents change. (AFI 21-101, Paragraph 2.7.12.1.)

2.3. Maintenance Supervision Responsibilities. Maintenance Supervision consists of Operations Officer / Maintenance Superintendent (MX SUPT)

2.3.1. Ensure engine download data is fully maintained in ALIS and P&W EMS. **(T-2)**. SOI 1513.06. (AFI 21-101, Paragraph 2.9.2)

2.3.2. Special Purpose Recoverable Authorized Maintenance (SPRAM) accounts are not applicable. (AFI 21-101, Paragraph 2.9.17)

2.3.3. Ensure ARs are used in ALIS to report materiel deficiencies. SOI 1514.02. (AFI 21-101, Paragraph 2.9.18.)

2.4. Flight Commander/Flight Chief or Aircraft Maintenance Unit (AMU) Officer in Charge (OIC)/Chief:

2.4.1. Warranty Items are analyzed by the JPO. Deficiency reporting is accomplished IAW **paragraph 3.8.33**. SOI 1514.02. (AFI 21-101, Paragraph 2.10.25.)

2.4.2. Work center supervisors request bench stock levels via the unit Supply Section. The Supply Section will forward bench stock levels through the quarterly review process. SOI 1514.02. (AFI 21-101, Paragraph 2.10.27.)

2.5. /Chief

2.5.1. Review the CMMS on a daily basis to monitor scheduled and deferred events. SOI 1505.16 and 1505.19. (AFI 21-101, Paragraph 2.11.8.)

2.5.2. Review work center ALIS data entries for the previous day and all preceding non-duty days in CMMS for job accuracy and completeness. (AFI 21-101, Paragraph 2.11.9.)

2.5.3. Use ALIS to submit an AR identifying discrepancies. SOI 1514.02. (AFI 21-101, Paragraph 2.11.23.)

2.5.4. Ensure that all accessible Electronic Equipment Log (EEL) information is complete and accurate. Where errors are identified, they are to be addressed by using the sync with EEL function, or via the Problem Reporting and Resolution and AR process. SOI 1505.07.

2.6. Production Superintendent (Pro Super)

2.6.1. Release (exceptional release (ER)) aircraft for flight via the CMMS tool in ALIS IAW SOI 1505.18. An ER will include review of all opened, closed, and deferred work packages produced since last ER. **(T-2)**. Additionally, all Production Aircraft Inspection Requirements (PAIRs) will be reviewed for currency. **(T-2)**. SOI 1505.18. (AFI 21-101, Paragraph 2.12.1)

Chapter 3

AIRCRAFT MAINTENANCE SQUADRON (AMXS)

3.1. Flight line Expediter

3.1.1. Maintain copies of the items listed in AFI 21-101 paragraph 3.6.4.; reference ALIS for the MEFL (when available), LCN and IPI listing. (AFI 21-101, Paragraph 3.6.4.)

3.1.2. Use ALIS/CMMS tool to monitor back-ordered and requisitioned parts. (AFI 21-101, Paragraph 3.6.7.)

3.2. Aircrew and Maintenance Debrief Section

3.2.1. Check ALIS for Airframe Time.

3.2.2. Ensure proper generation/execution of manual Health Reporting Codes (HRCs) resulting from AV exceedances. SOI 1513.04.

3.2.3. PHM Data Download. SOI 1513.05.

3.2.3.1. Potable Maintenance Device (PMD) will be downloaded at the end of the flying day for each sortie. (T-2). Exceptions for the situations listed below:

3.2.3.1.1. Back-to-back missions that were pre-scheduled in ALIS.

3.2.3.1.2. Per Aircraft Release Authority's decision where ALIS is not available (away from the AV host Standard Operating Unit (SOU)) for a prompt processing of the PMD download.

3.2.4. Propulsion PHM Data Collection will be accomplished. SOI 1513.06.

3.3. Aircraft Section

3.3.1. Aircraft Sections will perform propulsion tasks to include Engine Equipment Maintenance Section responsibilities.

3.4. Specialist Section

3.4.1. Specialist Section will perform Electro Environmental tasks. (AFI 21-101, Paragraph 3.9.5.)

3.4.2. OG personnel perform re-programming actions via Offboard Mission Support (OMS) (as applicable)/PMD. (AFI 21-101, Paragraph 3.9.2.1.)

3.5. Weapons Section

3.5.1. Dash 21, AME and Normally Installed Equipment (NIE) equipment inventory is tracked in ALIS. (AFI 21-101, Paragraph 3.10.1.17 and 4.6.2.4.)

3.5.2. AME Management. SOI 1516.01

3.5.2.1. The Operating Unit/Squadron will designate personnel responsible for receipt/turn in, acceptance, storage, usage tracking, aircraft configuration and management of AME items using ALIS CMMS in support of F-35 aircraft daily operations. (T-2).

3.5.2.2. The Operating Unit/Squadron will ensure all automatically or manually populated AME data in ALIS is reviewed for accuracy. **(T-2).**

3.5.2.3. The Operating Unit/Squadron will ensure all on and off equipment requiring AME life tracking/usage parameter(s) are correctly annotated and reviewed for accuracy. **(T-2).**

3.5.2.3.1. AME Storage Designation: The physical storage location is virtually designated and annotated in CMMS. If a final virtual off-aircraft AME designation has not been established, contact your local ALIS administrator.

3.5.2.3.2. Establish and monitor gun room security and explosive licenses if required. (AFI 21-101, Paragraph 4.6.2.3.)

3.5.2.3.3. AME section (If formed). This section accounts for, stores, controls, unpacks and packs AME, in coordination with the AMU weapons section NCOIC and WWM. (AFI 21-101, Paragraph 4.6.4.)

3.5.2.3.4. Develop and implement a program for documenting issue and receipt of in-use AME. **(T-2).** (AFI 21-101, Paragraph 4.6.4.1.)

3.5.2.3.5. Maintain the ALIS for installed guns, gun systems, and gun component TCIs or inspection data, based on round count limits listed in the PAIR JTD Data Module, including updating rounds from the AF Form 2434 or locally developed form. (AFI 21-101, Paragraph 4.6.3.4.)

3.5.2.3.6. Supply receives due-in AME items, performs an induction process per SCM Instructions and loads the AME items into the ALIS SOU.

3.5.2.3.7. AME Operating Unit/Squadron Acceptance: Supply notifies the receiving Operating Unit/Squadron that a due-in AME item has been delivered and is ready for pickup, or per local SCM policies. SOI 1516.01.

3.5.2.3.8. Receiving Initial/New AME: When the gaining Operating Unit/Squadron receives AME they shall access CMMS and establish a life limited Track Usage Record (TUR) per the PAIR as listed in JTD A13-10 tables. **(T-2).** Using the tools within CMMS, populate the TUR with the required life limited tracking data/usage parameters. Once established, the aircraft AME usage must be manually entered into CMMS.

3.5.2.3.9. The serviceable AME item requires a serviceable condition tag, which contains part and serial number, condition and current usage data. The AME item physically becomes the property of the gaining Work Center/assigned squadron and resides in their AME Storage facility.

3.6. Weapons Expediter

3.6.1. Maintain copies of the items listed in AFI 21-101 paragraph 3.6.4.; reference ALIS for the MEFL (when available), LCN and IPI listing. (AFI 21-101, Paragraph 3.6.4.and 3.10.2.3.)

3.7. AMU Decentralized Material Support (DMS). Supply support will:

3.7.1. Requisition parts through ALIS/CMMS tool. When necessary, Supply personnel can assist with follow up via contacting JSF Supply warehouse. (AFI 21-101, Paragraph 3.12.1.)

3.7.2. DIFM/RMA assets will be tracked within the PBL construct via JSF Supply warehouse using the Industrial and Financial System (IFS) tool. (AFI 21-101, Paragraph 3.12.4.)

3.7.3. The unit is responsible for management, including replacement of damaged or lost reusable containers. The LRS will subsume F-35 packaging and reusable container responsibilities consistent with process used for legacy assets. (AFI 21-101, Paragraph 3.12.5.)

Chapter 4

MAINTENANCE SQUADRON (MXS)

4.1. Maintenance Supervision Responsibilities

4.1.1. Base level repair capability is performed through the established PBL standards, if applicable. (AFI 21-101, Paragraph 4.2.2)

4.1.2. Use the CRM tool in ALIS to submit an AR for JTD changes/clarification. SOI 1514.02. (AFI 21-101, Paragraph 4.2.6)

4.2. Accessories Flight

4.2.1. Electro Environmental responsibilities reside in Specialist Section in AMXS. (AFI 21-101, Paragraph 4.4.)

4.2.2. The MXG/CC may conduct an egress final every 30 days using a locally developed checklist.

4.3. Aerospace Ground Equipment (AGE) Flight

4.3.1. Refer to [paragraph 2.1.1](#) for AGE Minimum Essential Levels (MEL). (AFI 21-101, Paragraph 4.5.2.1.)

4.3.2. Ensure equipment is shipped according to JPO/PBL disposition instructions/requirements. (AFI 21-101, Paragraph 4.5.2.11.)

4.4. Armament Flight

4.4.1. Armament Flight responsibilities are accomplished through the AMU Weapons Section. (AFI 21-101, Paragraph 4.6.)

4.5. Avionics Flight

4.5.1. Avionics Flight does not exist under the maintenance concept. (AFI 21-101, Paragraph 4.7.)

4.6. Fabrication Flight

4.6.1. The NDI section NCOIC will establish/obtain NDI inspection technique files by submitting an AR to ALGS Operations Center and LST through ALIS. (T-2). SOI 1514.02. (AFI 21-101, Paragraph 4.8.4.5.)

4.6.2. LO Aircraft Structural Maintenance Section. (AFI 21-101, Paragraph 4.8.5.)

4.6.2.1. Manage all aspects of LOHAS for assigned aircraft (see [Attachment 3](#)), Low Observable Defect Entry Module (LODEM), Signature Assessment Module (SAM) and LO Maintenance Management Module (LOMMM).

4.6.2.2. Monitor fleet LOHAS margin used values and ensure aircraft are scheduled for LO margin reduction when individual aircraft LOHAS values reach 80% margin used. (T-2).

4.6.2.3. Coordinate with AMU Supervision, Production Superintendent and AMU Plans Scheduling and Documentation (PS&D) to ensure aircraft downtime is scheduled for LO

margin reduction at the appropriate time based on overall fleet health and/or LOMMM damage priority screen. (T-2).

4.6.2.4. Concurrent maintenance restrictions will be determined by Maintenance supervision and local bioenvironmental during corrosion prevention/treatment or coatings restoration when hazardous/toxic materials are in use requiring the use of specialized personal protective equipment.

4.7. Propulsion Flight

4.7.1. Propulsion Flight responsibilities to include Engine Equipment Maintenance Section responsibilities are performed by Aircraft Section due to the F-35 maintenance concept. (AFI 21-101, Paragraph 4.11.)

4.8. Test, Measurement, and Diagnostic Equipment (TMDE) Flight

4.8.1. TMDE responsibilities are managed through the PBL contract for program specific PMEL items.

Chapter 5

5.1 MAINTENANCE OPERATIONS

5.1.1. Use the ALIS to manage ICAO codes for on/off-station possessed aircraft. Since the capability does not exist for utilization of Purpose Identifier Codes in ALIS, submit changes to the MAJCOM Aerospace Vehicle Distribution Officer (AVDO). (AFI 21-101, Paragraph 5.2.1.8.) **Note:** ALIS CMMS status only allows the aircraft to be in a FMC, PMCM, PMCS, NMCA, NMCM or NMCS status. Legacy statusing is utilized, but does not match ALIS.

5.1.2. Base level repair is Not Applicable. (AFI 21-101, Paragraph 5.2.1.10.)

5.2. Maintenance Operations Center (MOC)

5.2.1. The MOC will use ALIS to monitor and coordinate sortie production, maintenance production, communicate priorities, and execution of the flying and maintenance schedules while maintaining visibility of fleet health indicators. (AFI 21-101, Paragraph 5.2.2.)

5.2.2. Reference ALIS and SOI 1505.13 for air vehicle status reporting. (AFI 21-101, Paragraph 5.2.2.1.)

5.3. Plans, Scheduling, and Documentation

5.3.1. PS&D will be the POC for managing and tracking TCTD, PAIRs, and aircraft equipment transfer. (AFI 21-101, Paragraph 5.2.4.)

5.4. Maintenance Management Analysis (MMA) Section

5.4.1. MMA requirements are limited by ALIS capabilities. (AFI 21-101, Paragraph 5.2.5.)

5.4.2. ALIS administrators are responsible for system database management. (AFI 21-101, Paragraph 5.2.5.9.)

Chapter 6

QUALITY ASSURANCE (QA)

6.1. Chief Inspector Responsibilities

6.1.1. A master standardized AFTO Form 781-series forms binder is not applicable. (AFI 21-101, Paragraph 6.4.10.)

6.2. QA Product Improvement Programs (PIP)

6.2.1. Provide maintenance crosstell information by using the approved MDS process (e.g., Customer Relationship Management (CRM) application of ALIS via an AR). SOI 1514.02. (AFI 21-101, Paragraph 6.4.5.1.)

6.2.2. Use an AR in ALIS to report materiel deficiencies, IAW SOI 1514.02 and [Paragraph 11.10](#) (AFI 21-101, Paragraph 6.9.6.1.)

6.3. Configuration Management (CM) and Modification Management. CM is managed by the contractor through ALIS. (AFI 21-101, Paragraph 6.10.)

6.4. Technical Order Distribution Office (TODO). JTD is managed by ALGS and LST. (AFI 21-101, Paragraph 6.11.)

6.4.1. TCTD management is accomplished IAW PBL standards. Date stamping TCTDs is not compatible with program requirements as TCTDs are distributed through ALIS. However, some TCTDs are distributed through Joint Strike Fighter Data Library (JDL) or attached to Urgent Field Notices (UFNs) and still require review and a date stamp. (AFI 21-101, Paragraph 6.11.1.3.)

6.4.2. Maintain and utilize the SEMM in the same manner as an AF Technical Order. Follow procedures outlined within TO 00-5-1, to the fullest extent possible. **(T-2).** Address any deficiency or gaps with the SEMM through the established AR process.

6.5. Functional Check Flights (FCFs) to include Operational Check Flights (OCFs). The criteria used to determine if/when a Check Flight is required is identified within JTD during TCTD follow-on checks, via an Aircraft Return Action (ARA) or as outlined in AFI 21-101. SOI 1505.23. (AFI 21-101, Paragraph 6.13.)

6.6. Weight and Balance (W&B) Program

6.6.1. If discrepancies exist within Weight and Balance records/data, an AR must be submitted utilizing the CRM tool in ALIS to correct discrepancies, IAW SOI 1505.20 and [Paragraph 11.10](#) (AFI 21-101, Paragraph 6.16.1)

6.6.2. The physical accomplishment of an F-35 weight and balance is currently a depot level task, requiring only the management and control of the Weight and Balance handbook and applicable updates required by unit level personnel.

6.6.3. Transfer of Air Vehicle Weight Balance records.

6.6.3.1. The transferring of data files between the ALIS work station and the Government Furnished Equipment (GFE) laptop/work station hosting the Automated Weight and Balance System (AWBS) software is carried out in accordance with Service

electronic media transfer policy to ensure safe and secure transfer of data. Data transfer devices will comply with Service policies and regulations. This can include TCTD mod packages, Zero Fuel Mass Properties (ZFMP) ADL and Form F records.

Chapter 7

IMPOUNDMENT PROCEDURES

7.1. Impoundment Process and Procedures

7.1.1. For parts that are removed as a part of an investigation, mishap or accident the following applies:

7.1.1.1. For SE, use the process of locking down the asset and do not turn in the part to supply until authorized. **(T-2)**.

7.1.1.2. For parts orderable within ALIS, the part will be quarantined. **(T-2)**.

7.1.2. Items will be released from Quarantine only when authorized. **(T-2)**.

Chapter 8

TOOL AND EQUIPMENT MANAGEMENT

8.1. Tool and Equipment Management. F-35 program provided tools will be tracked and maintained in ALIS. Each tool is marked with an appropriate logistics control/sequence number. SOI 1508.06. (AFI 21-101, Paragraph 8.1)

8.1.1. Ensure JPO provides CTKs IAW production contract guidelines.

8.1.2. Support personnel will requisition a new tool in ALIS. Ensure replacement tools received are appropriately marked.

8.1.2.1. Common Hand Tools and Tool Containers procured under emergency conditions may be delivered unmarked. In those cases, the receiving unit shall locally etch the replacement tool or container with the same Tool ID number as the broken or lost tool/container it is replacing.

8.1.3. If a tool is found, personnel can find the tool owner by comparing the sequence number to the Tool Marking Organizational Matrix or reference SOI 1508.06 for additional contact information.

8.1.4. All locally manufactured, developed, or modified tools used on program provided equipment or aerospace vehicle will be submitted through an AR for approval. (AFI 21-101, Paragraph 8.7)

8.2. Support Equipment Maintenance Matrix (SEMM). The primary source for technical data used by authorized personnel to conduct maintenance for SE is verified JTD. For detailed information on the SEMM see [paragraph 1.4.3](#) SOI 1508.09.

Chapter 9

MATERIEL MANAGEMENT SUPPORT

9.1. General. Supply chain management functions are regulated through PBL. (AFI 21-101, Paragraph 9.1.)

9.2. Parts Ordering. Aircraft parts are ordered from JSF Supply warehouse through CMMS/IFS interface. SOI 1505.29 (AFI 21-101, Paragraph 9.4)

9.2.1. The process outlined in this instruction is applicable to only those parts that can/will be ordered using ALIS. Any requisitions outside of ALIS, using either legacy or other processes/systems, will be left to Service policy to detail, manage and control.

9.2.2. Ordering and turn in of GFE/Government Furnished Material (GFM) parts will be done using the legacy system in line with Service policy.

9.2.3. For Propulsion System parts, ordering will be carried out using the PSC Workstation.

9.2.4. Classified and Controlled parts will be marked in accordance with Service policy for classified asset markings.

9.2.5. Parts ordering for On-Equipment maintenance:

9.2.5.1. Parts ordering for On-Equipment maintenance is carried out to support the WO execution phase. **Note:** GFE/GFM parts ordering for On-Equipment maintenance will not be selectable for ordering within the CMMS application, consult the local supply specialist for ordering details.

9.2.6. Parts ordering for consumables/Pre-Expended Bin (PEB).

9.2.6.1. Parts ordering for consumables and PEB are carried out to support the WO execution for replacement of minor hardware and consumable items. **Note:** Ordering GFE/GFM through CMMS cannot be accomplished. Consult the local supply specialist for ordering details.

9.2.7. Parts ordering in support of Off-Equipment maintenance:

9.2.7.1. The process of ordering parts/subassemblies for parts at an Off-Equipment work center is detailed in SOI 1505.29. **Note:** Ordering GFE/GFM through CMMS cannot be accomplished. Consult the local supply specialist for ordering details.

9.3. Parts Processing. Mission Capable sourcing and request for upgrade, downgrade and cancel MICAP requirements are coordinated with JSF Supply. Sample MICAP Verification Worksheet ([Attachment 4](#)) may be used to assist in the verification process prior to backorder. (AFI 21-101, Paragraph 9.6.)

9.4. Bench Stock. Work center supervisors request bench stock levels via the unit Supply Section. The Supply Section will forward bench stock levels through the quarterly review process. (AFI 21-101, Paragraph 9.8)

9.5. DIFM Management. DIFM will be managed IAW applicable SOIs, SCM Warehouse Guide, ALIS Users Guide and established PBL/PBA metrics. (AFI 21-101, Paragraph 9.21.)

9.5.1. Repair cycle asset management is performed through the established PBL standards. (AFI 21-101, Paragraph 9.21.2.)

9.5.2. Source of Repair Identification. SOI 1505.30.

9.5.2.1. Upon part turn-in, the local supply specialist will be notified by ALIS SCM as to whether the part can be repaired locally or requires shipment to an OEM/Depot.

9.5.2.2. Routing of the part to OEM/Depot will be carried out using the details provided for shipment by SCM.

9.5.2.3. Routing of part to an O+ maintenance work center.

9.5.2.3.1. Identification of the O+ (off-equipment) maintenance work center is carried out by the local supply specialist based on local/unit level capabilities.

9.5.3. Parts Turn-In. SOI 1505.29.

9.5.3.1. The part turn-in process is the same regardless of On- or Off-Equipment maintenance tasks.

9.5.3.2. The parts turn in process is carried out for each repairable item that is identified by SCM as requiring turn in. For those parts that generate a "Due In" status in CMMS/SCM, the details for each part will be listed on the "Due In List" in.

9.5.3.3. For parts that require quarantine in support of investigations or exhibit management, follow the part turn-in process detailed in SOI 1505.29, Attachment 7.

9.5.3.4. Turn-in of GFE/GFM parts will be done in line with Service policy and procedures outside of ALIS.

9.5.4. Requisition Management and Reporting:

9.5.4.1. CMMS material requisition listing:

9.5.4.1.1. CMMS provides a searchable view of requisitions from the Material Requisition Page. From this page an authorized user can edit, receive, turn in and adjust requisitions on the SOU.

9.5.4.1.2. CMMS Built In Reporting Tool (BIRT) reports are available from the Material Requisition Page and provide detailed listings of requisitions, PEB and other supply process related information.

9.5.5. Due-In List Page:

9.5.5.1. The Due-In list allows users to view and manage parts that are awaiting turn-in from maintenance.

9.5.6. CMMS Order Cancellation.

9.5.6.1. Order cancellation can be accomplished from the Material Request Details Page and only on requisitions in the state of New, Released, or Picked. This is a permission-based function within CMMS and control of this function is left to the Operating Unit/Squadron to authorize in line with Service policy. **Note:** Order cancellation must be done prior to Work Order Cancellation. (T-2).

9.6. Bench Check and Repair Policy. Bench check and repair is performed through the established PBL standards. (AFI 21-101, Paragraph 9.24.)

9.7. Maintenance Turn-Around (TRN) Record Update Processing. Maintenance turn-around record update processing is performed through the established PBL standards. (AFI 21-101, Paragraph 9.25.)

9.8. Buildup Items. ALIS will be used to manage built up items (e.g. wheel/tire) from alternate locations. (AFI 21-101, Paragraph 9.26.)

9.9. Deficiency Report (DR) Exhibits. Use the AR program. (AFI 21-101, Paragraph 9.27)

9.10. Hazardous Material (HAZMAT). SOI 1509.01.

9.10.1. Common HAZMAT requisitions will be processed using legacy MIS in accordance with established policies and procedures.

9.10.2. Issue to Maintenance:

9.10.2.1. It is the responsibility of the Local HAZMAT facility (either at the Retail Warehouse or Local HAZMAT facility, dependent on local policy) to communicate to the Retail Supply Warehouse that F-35 HAZMAT material has been issued to a maintenance organization. Authorized personnel will track material issues and adjust the inventory levels for F-35 unique HAZMAT in ALIS SCM. **(T-2).** The Local HAZMAT facility and the Retail Supply Warehouse will determine how they will coordinate the information when HAZMAT materials are issued (e.g., MOA). ALIS SCM automatically notifies the ASC Item Analyst who will forecast and analyze replenish needs.

9.10.3. Reconciliation Process:

9.10.3.1. A process for inventory reconciliation between the Retail Supply Warehouse and the Local HAZMAT facility shall be described in a formal document (e.g., Memorandum of Agreement). **(T-2).**

Chapter 11

ADDITIONAL MAINTENANCE REQUIREMENTS AND PROGRAMS

11.1. Aircraft Grounding. SOI 1501.01, 1514.05 (will supersede 1501.01). (AFI 21-101, Paragraph 11.4)

11.2. Foreign Object Damage (FOD) Prevention Program

11.2.1. For suspected material failure, utilize an AR IAW [paragraph 11.9](#) SOI 1514.02. (AFI 21-101, Paragraph 11.8.6.2.1. and 11.8.6.3.3.)

11.3. Dropped Object Prevention (DOP) Program

11.3.1. For deficiencies discovered/suspected, submit an AR IAW **Paragraph 11.10**. SOI 1514.02. (AFI 21-101, Paragraph 11.9.2.1.)

11.4. Aircraft Structural Integrity Program (ASIP). Refer to **paragraph 2.1.5**. (AFI 21-101, Paragraph 11.10.)

11.5. Identification Friend or Foe (IFF) Program.

11.5.1. Perform IFF checkouts when prescribed per JTD. (AFI 21-101, Paragraph 11.11)

11.6. Radar Warning Receiver (RWR)/Radar Threat Warning (RTHW) Testing

11.6.1. External testing and appointment of RWR/RTHW manager is not required. (AFI 21-101, Paragraph 11.12.1. and 11.12.2.)

11.7. Cannibalization Program

11.7.1. Unnecessary cannibalization of parts can have a costly impact on the PBL contract. SOI 1505.15. (AFI 21-101, Paragraph 11.13.1.)

11.8. Engine Run Training and Certification Program

11.8.1. Integrated Power Plant (IPP). (AFI 21-101, Paragraph 11.17.2.2)

11.8.2. Part I and Part II testing does not apply to PMA operators from the ground. (AFI 21-101, Paragraph 11.17.10.2.)

11.8.3. IPP operators using only the PMA from the ground need not be tracked on the SCR. (AFI 21-101, Paragraph 11.17.11.1.)

11.9. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program

11.9.1. Additional CDDAR training will be provided at the Integrated Training Center (ITC). SOI 1505.01. (AFI 21-101, Paragraph 11.28.2.2.1.)

11.10. Customer Relationship Management Program. SOI 1514.02

11.10.1. Responsibilities. (T-2).

11.10.1.1. The CRM tool within ALIS shall be used to report problems via an AR. All ARs raised via CRM shall be transmitted via the Optional and Required Screening Points (OSP & RSP). These points screen ARs for accuracy of entries and information as well as prevent classified, sensitive or International Trade in Arms (ITAR) information from

being transmitted. OSP and RSP personnel shall be designated via the ALIS System Permission Request (ASPR) to ALIS administrators. Those units not assigned to established groups will be designated by the appropriate site lead or QA department.

11.10.1.2. ARs shall be submitted for reporting actions that require rectification outside the capability of the local unit. Examples of such cases are JTD changes, modifications, engineering analysis etc. Many of these occasions have specific forms in existing policy documents; the AR process will replace these mediums in the F-35 environment.

11.10.1.3. The AR “Severity” provides an additional level of classification to the AR beyond that provided by the category. Severities are ranked as high, medium and low with each having its own corresponding impact.

11.10.1.4. The AR “Category” identifies conditions by relative importance and the urgency of the resolution required. Category 1 with severity classification of “high” has the most severe consequences, resulting in potentially hazardous condition. ARs must provide adequate detail to support the desired category.

11.10.1.5. To ensure a thorough review prior to submittal, ARs should not be processed as initiator, OSP and RSP by the same individual. Exceptions may be made if there are no alternative measures available.

11.10.2. Overall timelines for ARs.

11.10.2.1. Established timelines will be adhered to in the AR process. These timelines are general guidelines for AR initiation. Every level of approval must remain cognizant of timelines to prevent undue delay of ARs. Delays must be communicated to the OSP and RSP during the AR initiation process.

11.10.3. AR Submission Process.

11.10.3.1. Initiator shall:

11.10.3.1.1. Exhaust all available means of resolution prior to submitting an AR.

11.10.3.1.2. If applicable, inform expeditor or aircraft crew chief of AR requirement.

11.10.3.1.3. Inform supervision of AR request to be implemented.

11.10.3.1.4. Ensure detail is added to AR to alleviate vagueness.

11.10.3.1.5. Include tail number of aircraft if AR is related to an aircraft.

11.10.3.1.6. Include JTD number if AR is related to JTD.

11.10.3.1.7. Utilize SOI 1514.02 to ensure correct AR categorization, severity and classification.

11.10.3.1.8. Notify Squadron OSP of AR submittal.

11.10.3.1.9. Monitor AR status via CRM tool.

11.10.3.2. OSP shall:

11.10.3.2.1. Review all AR submissions to ensure the correct priority has been assigned and AR submission is valid.

11.10.3.2.2. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable).

11.10.3.2.3. Ensure details provided by initiator explain problem completely.

11.10.3.2.4. Approve and submit ARs to the RSP.

11.10.3.2.5. Notify RSP of AR submittal.

11.10.3.2.6. Monitor AR status via CRM tool.

11.10.3.3. RSP shall:

11.10.3.3.1. Ensure AR has been routed through OSP prior to submittal.

11.10.3.3.2. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable).

11.10.3.3.3. Ensure details provided by initiator and OSP explain problem completely.

11.10.3.3.4. Once request is validated submit AR to ALGS and monitor the AR's status via CRM tool.

11.10.3.4. ALGS role.

11.10.3.4.1. ALGS responsibilities are outlined in SOI 1514.02.

11.10.4. Resolution of AR Disparities:

11.10.4.1. Disparities will be resolved by the MXG/CC or OG/CC.

11.10.5. AR Review Team.

11.10.5.1. ARs shall be reviewed at all levels to ensure proper categorization and severity is assigned ([Table 11.1](#)).

Table 11.1. AR Categories and Timelines.

AR Category	Severity	Impact	Originator Submission	Initial Response	Initial Response	Initial Response
Cat I	High	Flight/Ground Safety May cause death, serious injury or catastrophic loss of aircraft or equipment.	12 hours	12 hours	48 hours	14 days

Cat I	Medium	Non Mission Capable (NMC) - Multiple Aircraft Known single issue that has resulted in or is expected to result in multiple (more than one) aircraft being declared NMC.	24 hours	24 hours	72 hours	30 days
Cat I	Low	Non Mission Capable (NMC) - Single Aircraft Known single issue that results in single aircraft being declared NMC.	24 hours	48 hours	72 hours	60 days
Cat II	High	Partially Mission Capable (PMC) - Multiple Aircraft Known single issue that has resulted or is expected to result in multiple (more than one) aircraft being declared PMC.	48 hours	96 hours	5 days	120 days
Cat II	Medium	Partially Mission Capable (PMC) - Single Aircraft Known single issue that results in single aircraft being declared PMC.	48 hours	5 days	15 days	120 days
Cat II	Low	Non NMC or PMC related issue Known issue that does not result in either a NMC or PMC situation.	5 days	10 days	30 days	120 days

11.10.5.2. Squadron OSP and respective RSP must consider fleet implications when preparing ARs for submittal. Depending upon the circumstances for the AR, an AR may have an impact on all assigned aircraft/equipment regardless of the squadron assigned. Generally, ARs categorized as Category 1 (High, Medium, Low) or Category II (High) will fall into this criteria.

11.10.5.3. If an AR has fleet implications, respective squadron RSP will coordinate with additional squadrons to review the potential AR prior to submittal. All affected squadron RSPs will review the potential AR for impacts on their unit. Additionally, an AR review

will be conducted to ensure all information is accurate and the proper category and severity has been assigned.

11.10.5.4. The review team shall consist of the following if applicable as determined by RSP:

11.10.5.4.1. QA Representative.

11.10.5.4.2. OG Representative.

11.10.5.4.3. Contractor Representative.

11.10.5.4.4. Subject Matter Expert.

11.10.5.5. ARs determined to have fleet implications will be annotated on AR by respective squadron RSP. Respective squadron RSP will annotate the review in the AR comment section prior to submittal by listing affected organizations and members of AR Review Team in attendance.

11.10.6. AR process flow.

11.10.6.1. Normal AR process flow.

11.10.6.1.1. Squadron initiator prepares AR and informs supervision of intent for submittal. Notify Squadron OSP of AR submittal.

11.10.6.1.2. Squadron OSP reviews AR submission to ensure the correct priority has been assigned and AR submission is valid. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable). Submit AR for RSP approval.

11.10.6.1.3. Respective squadron RSP reviews AR submission to ensure the correct priority has been assigned and AR submission is valid. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable). Submit AR to ALGS.

11.10.6.2. AR process flow having potential fleet implications.

11.10.6.2.1. Squadron initiator prepares AR and informs supervision of intent for submittal. Notify Squadron OSP of AR submittal.

11.10.6.2.2. Squadron OSP reviews AR submission to ensure the correct priority has been assigned and AR submission is valid. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable). Submit AR for RSP approval.

11.10.6.2.3. The group RSP reviews AR submission to ensure the correct priority has been assigned and AR submission is valid. Ensure all information/attachments provided on AR are technically accurate, complete and annotate comments (if applicable).

11.10.6.2.4. Group RSP coordinates AR through all affected squadrons. Coordination can take place by meeting, phone, email or any medium necessary to inform all units of potential fleet implications.

- 11.10.6.2.5. Respective group RSP annotates AR when AR Review Team review is complete.
- 11.10.6.2.6. Respective squadron RSP submits AR to ALGS.
- 11.10.7. Leadership review of CAT I, High ARs.
 - 11.10.7.1. It is the RSP's responsibility to ensure group leadership is notified prior to AR submittal. All major maintenance will be coordinated with respective group commander or their designated representative prior to AR submittal. For instance, QA is responsible for notifying MXG/CC prior to submitting an AR for major maintenance resulting in an unserviceable condition of an aircraft.
 - 11.10.7.2. Squadron and group leadership should be briefed periodically on high interest ARs.
 - 11.10.7.3. Reports available in ALIS CRM are encouraged for briefing material.
 - 11.10.7.4. Group commanders may further define guidelines for AR reviews within their group prior to AR submittal.
- 11.10.8. Operations under more than one SOU.
 - 11.10.8.1. All procedures as defined above will apply.
 - 11.10.8.2. ALIS accounts will be established on additional SOUs as required. As ALIS matures, personnel may be loaded on additional SOUs as Customer Review Board representatives.
 - 11.10.8.3. Procedures will be further defined as additional SOUs are established.
- 11.10.9. CRM team member composition.
 - 11.10.9.1. CRM is arranged by teams. Each team is comprised of members from specified squadrons and groups. Obtaining team composition is imperative to assignment of AR review responsibilities.
 - 11.10.9.2. Respective RSPs will designate team members requiring OSP and RSP permissions to the local ALIS administrators, the ALGS and LST by letter for the team/teams under their area of responsibility:
 - 11.10.9.2.1. This process of gaining OSP and RSP permissions does not alleviate completing the permissions section on ALIS System Permission Request Form.
 - 11.10.9.2.2. Distribution Team members are responsible for receiving UFN, TCTD and other correspondence from ALGS.
 - 11.10.9.3. Distribution team responsibilities include the following at a minimum:
 - 11.10.9.3.1. Information is forwarded to appropriate organization within their team/teams for action.
 - 11.10.9.3.2. Receipt of information forwarded to ALGS as required. For example, when a UFN is received, MOC will report receipt to ALGS for items concerning the MXG. This notification is confirmation to ALGS that the field has received the UFN.

11.10.10. Contingency Back-up. In the event CRM is down, the following process shall be utilized to initiate an AR.

11.10.10.1. Submit AR via: Fax - 1-817-777-1868, Email - jsf-algs-center.fcaero@lmco.com and/or Phone - 1-888-433-5677.

11.10.11. Classified AR procedures.

11.10.11.1. Ensure classified ARs are produced IAW SOI 1514.02.

11.10.11.2. Protect classified information during the AR initiation process.

11.10.11.3. Consult assigned security manager for assistance, if necessary.

Chapter 12

MAINTAINING COMMERCIAL DERIVATIVE AIRCRAFT (CDA) (OMITTED)

Chapter 13

CENTRALIZED REPAIR FACILITIES (CRF) (OMITTED)

Chapter 14

AIRCRAFT AND EQUIPMENT CONTRACT SURVEILLANCE (OMITTED)

Chapter 15

MAINTENANCE PLANS, SCHEDULING AND DOCUMENTATION (PS&D)

15.1. Responsibilities

15.1.1. The use of MSAT is not required. (AFI 21-101, Paragraph 15.1.4.6)

15.1.2. The Wing AVDO ensures the asset transfer approval process and coordination between losing and gaining units required prior to, during and after an Asset transfer is accomplished and coordination on any outstanding supply demands. (AFI 21-101, Paragraph 15.1.5.2.1)

15.1.2.1. Any problems including lost or corrupt data will be dealt with by the AR process.

15.1.2.2. Coordinate on status reporting (AFI 21-103) AR submissions. (AFI 21-101, Paragraph 15.1.5.2.3.)

15.2. Data Documentation

15.2.1. EELs are embedded in ALIS and replace legacy AFTO Form 95. (AFI 21-101, Paragraph 15.2.1.2)

15.2.2. The intent of suspense validation is an embedded function within the ALIS. PS&D will continue to monitor due dates to ensure accuracy. (AFI 21-101, Paragraph 15.2.2.2.3)

15.2.3. Prior to the pre-dock meeting, use ALIS as the source of record for items out of configuration. (AFI 21-101, Paragraph 15.2.4.2.7)

15.2.4. Use ALIS in lieu of IMDS for pre-dock meetings. (AFI 21-101, Paragraph 15.2.4.3.4)

15.2.5. Use ALIS in lieu of IMDS for post-dock meetings. (AFI 21-101, Paragraph 15.2.5.1.5)

15.3. Configuration, TCTO, SI and TCI Management

15.3.1. Configuration Management (CM) is managed by the contractor through ALIS. (AFI 21-101, Paragraph 15.3.2)

15.3.1.1. Units are responsible for accurate reporting of AV configuration in the ALIS.

15.3.1.2. Units will create a WO for mis-configured items.

15.3.2. TCTD Management

15.3.2.1. QA personnel will use the CRM application in ALIS to submit an AR to report TCTD deficiencies IAW [Paragraph 11.10](#) of this instruction. SOI 1514.02. (AFI 21-101, Paragraph 15.3.3.1.5)

15.3.2.2. TCTD management is accomplished IAW PBL standards. PS&D will not chair a monthly meeting due to the programs supply chain management structure. There is no need for QA to distribute copies of TCTDs because ALIS will distribute them digitally. Therefore, there is also no need to maintain copies of TCTDs in a TCTD folder.

Additionally, TCTD validations are not accomplished IAW TO 00-5-15 and a local form may be used for TCTD proofing. (AFI 21-101, Paragraph 15.3.3.3)

15.3.2.3. TCTD kits will be managed by the ASC or PSC. (AFI 21-101, Paragraph 15.3.3.3.2.5)

15.3.2.4. PS&D will control and release TCTD kits from contractor sources IAW PBL standards. (AFI 21-101, Paragraph 15.3.3.3.2.7)

15.3.3. TCI forecasting is managed IAW PBL standards. (AFI 21-101, Paragraph 15.3.4.3)

15.3.3.1. For Remaining Life Estimate (RLE)/ Time to Maintenance (TTM), red is displayed upon the end of life or time limit reached and extensions can only be granted via the AR process or MAJCOM policy. Upon reaching the end of life or time limit, a HRC will automatically be generated for that event. If an HRC is not automatically generated, use an AFTO Form 95 to track the item. SOI 1505.19.

15.3.4. For major maintenance work processing, PS&D will coordinate on AR submissions through ALIS CRM application IAW **Paragraph 11.10** SOI 1514.02. (AFI 21-101, Paragraph 15.3.5)

15.3.5. Management of Scheduled and Prognostic Maintenance. SOI 1505.19.

15.3.5.1. Management of all AV Scheduled and Prognostic Maintenance requirements will be carried out within ALIS via SHM. Propulsion System (PS) Scheduled and Prognostic Maintenance will be managed, by P&W.

15.3.5.2. Scheduled Maintenance Inspections:

15.3.5.2.1. Scheduled maintenance inspections will be tracked in SHM.

15.3.5.2.2. Only authorized individuals will perform HIT creation.

15.3.5.3. Production Aircraft Inspection Requirements (PAIRs). SOI 1505.19.

15.3.5.3.1. PAIRs are those inspections driven by an approved Major Variance Request against a specific PN/SN. Each PAIR is applicable to specific TVEs as detailed in JTD. Specific details about the PAIR and work requirements will be detailed within JTD. These will also be visible within SHM.

15.3.5.3.1.1. PAIRs will be managed at the Operating Unit/Squadron level until they are rescinded by either a TCTD or attrition. Operating Unit/Squadron level personnel will verify the validity/applicability of PAIR inspection requirements against the directing JTD, the individual AV As Maintained CMMS records and recent configuration changes. Operating Unit/Squadron level personnel will need to close the HIT in SHM if a tracked item is replaced.

15.3.5.3.1.2. Using the Maintenance History BIRT report from CMMS can provide a listing of configuration changes to use when validating the PAIRs/HIT applicability.

15.3.5.4. Specific inspection requirements can be input into SHM by using the HIT tool, by using a Supplemental Servicing Inspection (SSI) or by adding it to a Task Template. If the requirement is linked to a Flight Servicing requirement (Before Operations

Servicing (BOS), Interim Operational Servicing (IOS) or Post Operations Service (POS)) then a SSI will be used or created.

15.3.5.5. Scheduled or Prognostic maintenance inspection requirements that require depot level support will require the initiation of an AR.

15.3.5.6. Authorization to deviate, along with any applicable latitudes, from Scheduled/Prognostic maintenance requirements will be granted via the AR process.

15.3.5.7. Deferring Scheduled and/or Prognostic Maintenance can be carried out only after the inspection requirement has been pushed from SHM to CMMS as a Work Order.

15.3.5.8. If an AR Response directs an inspection requirement, the HIT tool will be used to initiate these requirements.

15.3.5.9. If there is a requirement to adjust or correct usage on an aircraft or part, the Advanced Utilities Tool can be utilized by an authorized person to make the necessary changes.

15.3.6. Depot Induction. SOI 1505.12.

15.3.6.1. Operating Unit/Squadron will prepare aircraft and equipment for entry to depot level work efforts.

15.3.6.2. Operating Unit/Squadron will participate in the Pre and Post meetings for their respective aircraft. Pre-dock will be held no later than 30 days prior to aircraft induction into depot. Pre-dock/induction meeting will have, as a minimum, the Baseline Scheduled Work Package (SWP) and the F-35 Maintenance Request Form. Aircraft configuration required for depot induction will be discussed during Pre-dock/induction meeting. A Post-dock meeting will be held no later than 10 days prior to scheduled aircraft completion.

15.3.6.3. Operating Unit/Squadron will report unsatisfactory receipt, at either the squadron or depot level, through the Depot Feedback Questionnaire within 30 days. Submit an AR as required.

15.3.6.4. Additional work requests (Unit Level TCTDs), One Time Inspections (OTIs), Delayed Discrepancies, PAIRs will be annotated on a Maintenance Request Form submitted to the F-35 JPO no later than 60 days prior to aircraft induction for consideration. The F-35 JPO will notify requesting unit of what work will be approved and included in the depot work package.

15.3.6.5. The procedure to electronically transfer the ALIS portion of an asset's records will be accomplished utilizing CMMS to write the data to electronic media.

15.3.6.6. Non-ALIS portion of an asset's records will be transferred by electronic media.

15.3.6.7. When directed to transfer an asset, the originating unit will input all current state data associated with a HIT for the AV to a Deferred Work Order.

15.3.6.8. Following transfer within ALIS, the records will be transferred in line with existing Service policy for exporting electronic media:

15.3.6.8.1. Automated Weight and Balance System

15.3.6.8.2. Exceedance Management System

15.3.6.8.3. Propulsion System Records

15.3.6.8.4. Joint Oil Analysis Program Records

15.3.6.9. CMMS will cancel all requisitions in the “New” or “Released” state after the initiation of an asset transfer. The losing and gaining unit will coordinate to ensure necessary demands are transferred.

15.3.6.10. The losing Operating Unit/Squadron will ensure all requisition details are included in any paused WO, deferred WO or Follow on Maintenance Requirement prior to asset transfer.

15.3.6.11. The losing Operating Unit/Squadron will inform local SCM administrator/user of any outstanding requisitions that must be transferred/redirected to the gaining Operating Unit/Squadron. Transferal or redirection of open requisitions is a SCM responsibility.

15.3.6.12. The receiving unit will ensure that all necessary requisitions are visible and accurate on the gaining unit’s SOU. If problems or anomalies occur, an AR is to be initiated for resolution.

15.3.6.13. The receiving Operating Unit/Squadron will create HIT requirements for the asset identified on the deferred Work Order using the current state data included.

15.3.6.14. The gaining Operating Unit/Squadron will notify the losing unit to initiate the deletion of the AV from their SOU after the gaining unit has loaded and verified the data.

15.4. Maintenance and FHP Planning Cycle

15.4.1. Reference SOI 1505.19 for Maintenance and Operations Planning. (AFI 21-101, Paragraph 15.5.4)

15.5. Flying Scheduling Effectiveness (FSE) FSE is a leading indicator and measures how well the unit planned and executed the weekly flying schedule. The flying schedule developed by tail number is the baseline upon which the FSE is derived by comparing each day’s deviations. Deviations that decrease the FSE from 100% include: Scheduled sorties not flown because of maintenance, supply, operations; adds, cancels, and ground aborts; scheduled sorties that take-off more than 30 minutes prior to scheduled take-off; scheduled sorties that take-off more than 15 minutes after their scheduled take-off time. Disruptions to the flying schedule can cause turmoil on the flightline, send a ripple effect throughout other agencies, and adversely impact scheduled maintenance actions.

15.5.1. FSE computation and deviation recording are required for all AETC possessed aircraft.

15.5.2. Deviations. Schedule deviations apply to the approved/printed weekly flying and maintenance schedule, even though a coordinated change is accomplished using an AF Form 2407, *Weekly/Daily Flying Schedule Coordination*. When a unit coordinates a change to the printed weekly flying schedule, using an AF Form 2407, the unit is informing every one of the changed information and deviations will be recorded as appropriate. **Note:** Multiple deviations against a single line entry will not count towards FSE except for (a) additions that ground abort, (b) additions that cancel, (c) added aircraft/sorties that take-off late or early,

The AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*, is the official source document for take-off and landing data. For all deviations, the person recording the deviations in the MIS will provide a detailed explanation in the remarks section and a Job Control Number/Event ID in the MIS for all maintenance cancellations (CX), ground abort (before engine start, maintenance (GAA), ground abort (after engine start, before taxi, maintenance (GAB), ground abort (after taxi, maintenance (GAC) (as defined in [paragraph 15.5.2.1](#)), air abort (AA), air abort in-flight emergency (IFE) (AI), and in-flight emergency (FE) (as defined in [paragraph 15.5.2.2](#)). Flying schedule deviations fall into one of the following categories:

15.5.2.1. Ground Deviations. Ground deviations are events occurring before aircraft take-off. All ground deviations are recorded in the MIS and used in FSE calculations unless otherwise noted. Specific ground deviations are:

15.5.2.1.1. Ground Abort (GA). An aircraft that cannot take off due to a condition that occurs or is discovered after the aircrew arrives at the aircraft. The three types of maintenance ground aborts are as follows:

15.5.2.1.1.1. (GAA) . Ground abort, before engine start, maintenance.

15.5.2.1.1.2. (GAB) . Ground abort, after engine start, before taxi, maintenance.

15.5.2.1.1.3. (GAC) . Ground abort, after taxi, maintenance.

15.5.2.1.2. Addition. A sortie or aircraft added to the schedule not previously printed on the weekly schedule, will be recorded against the agency (Operations (OP), Maintenance (MX), Headquarters (HQ)) requesting the additional sortie or aircraft. Sorties added to the schedule will be used in Total Sorties Scheduled for FSE computation. Aircraft added to the schedule will not be used as a part of the Total Sorties Scheduled for FSE computation; however, aircraft adds (i.e., added spares) will be captured in the FSE Calculated-Deviations computation.

15.5.2.1.2.1. Functional Check Flights (FCF) and Operational Check Flights (OCF) whose primary purpose is to perform maintenance checks are not addition deviations, but will be coordinated using AF Form 2407. FCF/OCF sorties and sorties originating off-station without home-unit support will be considered "flown as scheduled" without recording deviations. FCF "chase" aircraft, when accompanying FCF/OCF training or checkout sortie for single seat MDS only (i.e., A-10) will be considered "flown as scheduled" without recording deviations. The FCF "chase" is for FCF qualified operator to conduct and/or evaluate training/checkout only.

15.5.2.1.3. Cancellation (CX). A scheduled aircraft or sortie that is not flown for any reason other than a ground abort. For hard line sorties (sorties supporting other defense customers), cancellations occur when it is determined the originally scheduled mission cannot be met.

15.5.2.1.4. Early Take-off (ET). An early take-off is a scheduled sortie launching more than 30 minutes prior to the published take-off time. **Exception:** Do not record early take-off deviations for hot pit turn sorties.

15.5.2.1.5. Late Take-off (LT). A late take-off occurs when a scheduled sortie becomes airborne more than 15 minutes after the scheduled take-off time. If the printed tail number is a ground abort and is replaced with a spare that takes off late, only the late take-off is computed in FSE. Another example is if an aircraft landed late, after the published landing time, and subsequently takes off late due to insufficient time to turn the aircraft, the late take-off deviation is recorded to the original cause for the late landing, such as, operations. Commanders must consider the impact when a sortie takes off late and the aircraft is scheduled to turn to another sortie that day. It may be best to shorten the sortie duration after a late take-off and land at the scheduled landing time, rather than fly the scheduled duration, due to a higher priority mission later in the day.

15.5.2.1.6. Spare (SP). A spare is a designated aircraft on the printed schedule to be used in case a scheduled primary aircraft cannot fly its scheduled sortie. Spare aircraft can also include aircraft that are scheduled to fly in sorties later in the day, have aborted from an earlier sortie, have flown earlier or released after FCF/OCF. **Note:** Do not count printed spares flown in scheduled lines as deviations when computing FSE.

15.5.2.1.7. Tail Number Swap (TS). Tail swaps are changes to the printed flying schedule involving aircraft tail numbers printed on that day's schedule. Tail swaps may be made up to crew show time. Tail swaps made after crew show are recorded as spare. The MOC must be notified of all tail swaps and record all tail swaps in the MIS. **Note:** Do not count Tail Number Swaps as deviations when computing FSE. Below are specific examples of tail swaps:

15.5.2.1.7.1. Changing aircraft in printed line numbers with printed spare aircraft.

15.5.2.1.7.2. Changing aircraft in printed line numbers to different printed line numbers.

15.5.2.1.7.3. Changing aircraft in printed line numbers to any previously flown aircraft. For example, tail swaps are allowed for aircraft after release from OCF/FCF or cross-country (XC) return aircraft.

15.5.2.2. Air Deviations. Air deviations are events occurring after take-off. They are recorded in the MIS, but are not included in FSE calculations. Ground deviations take precedence over air deviations. Air deviations fall into the following categories:

15.5.2.2.1. Air Abort (AA). An air abort is an aircraft/sortie that cannot complete its mission for any reason. Air aborts are considered a sortie flown against the flying hour program when reporting total sorties flown, but may not be considered a successful sortie based on mission effectiveness by operations to meet RAP/training/contingency requirements. Air aborts will be coded to the agency or condition that caused the aborted mission. Note: Effective mission decisions will be made by operations; however, a non-effective mission decision by operations does not necessarily mean an air abort occurred. For example, if one planned mission task out of a planned five tasks is not completed or operations flies an alternate mission (adversary, drone, etc.) and does not return the aircraft immediately to maintenance, the sortie should not be coded as an air abort if operations later determines, based on

the original mission profile, the sortie was non-effective. The Air Abort rate is a maintenance indicator and as a measure of re-work (sorties reflown).

15.5.2.2.2. Air Abort, IFE (AI). An air aborted aircraft/sortie with a situation resulting in an in-flight emergency declared by the aircrew.

15.5.2.2.3. Early Landing (EL). An early landing is an aircraft/sortie landing more than 30 minutes before the scheduled landing time. Early Landing deviations are not used when computing FSE.

15.5.2.2.4. IFE (FE). An aircraft/sortie with a situation resulting in an in-flight emergency declared by the aircrew after the mission is accomplished.

15.5.2.2.5. Late Landing (LL). A late landing is an aircraft/sortie landing more than 15 minutes after the scheduled landing time. If the sortie originated on time, record any subsequent late take-off or cancellation against the agency that caused the late landing. If the extended sortie did not originate on time, record any subsequent sortie deviation against the agency that caused the original delay. Late landings are not included in FSE calculations.

15.5.2.3. Ground Aborts (GA). A ground abort by itself is not a deviation from the flying schedule, but can cause a deviation such as lost sortie or late take-off. A ground abort is an event after crew show time preventing a “crew ready” aircraft from becoming airborne. Ground aborts will be recorded to the responsible agency or condition that caused the aircraft to abort. Ground aborts are categorized as GAA, GAB, GAC, OP, higher headquarters (HHQ), weather (WX), sympathy (SY), other (OT), etc. For maintenance ground aborts, do not use cause code MTx, only use GAA, GAB or GAC. For example, if an aircraft ground aborts and the sortie is not replaced by a spare, the lost sortie is a deviation towards FSE. Ground aborts on FCFs or OCFs will be recorded in MIS, but not used when computing FSE.

15.5.2.3.1. If a ground aborted aircraft is replaced by a spare, and the spare can meet the mission requirements, the original aircraft will be coded as a “spare ground abort.” **Note:** This is not used in computing FSE.

15.5.2.3.2. If the original aborted aircraft is launched on the original scheduled mission, but exceeds the 15-minute late take-off criteria, the sortie will be recorded as a late take-off.

15.5.2.3.3. If the aircraft lands, takes fuel via the hot pits, incurs an NMC condition after completion of hot pit refueling (receptacle disconnected) and can no longer continue, a ground abort is recorded.

15.5.2.3.4. If an aircraft ground aborts and is replaced by a spare and the spare ground aborts causing the sortie not to be flown, both ground aborts will be counted in the overall ground abort rate, the lost sortie will be considered cancelled and included as the deviation in FSE. The first ground abort would not be used in computing FSE.

Table 15.1. Common FSE Deviation Determination Matrix.

Event	Is the deviation		Remarks
	Recorded in MIS?	Calculated in FSE?	
A sortie is added to the flying schedule (excluding OCFs/FCFs, XC return)	Yes	Yes	Paragraph 15.5.2.1.2.
A sortie is added for an OCF/FCF/OCF/FCF “Chase”	No	No	These are considered flown as scheduled, paragraph 15.5.2.1.2.1
A sortie is cancelled	Yes	Yes	Once the decision is made to cancel the sortie, it is a cancel. If a decision is made after the cancel to go ahead and fly the sortie, it becomes an added line. Paragraph 15.5.2.1.3.
A sortie is determined to be non-effective	No	No	Not a deviation. The determination is made by operations and has no bearing on FSE. Paragraph 15.5.2.2.1
A take-off is determined to be late	Yes	Yes	Paragraph 15.5.2.1.5
A take-off is determined to be	Yes	Yes	Paragraph 15.5.2.1.4
A landing is determined to be early or late	Yes	No	A late landing may result in a late take-off on a subsequent sortie. See paragraph 15.5.2.2.5. to determine the cause of the subsequent late take-off.
A sortie is added to the schedule for weather attrition	Yes	No	Paragraph 15.5.4.1.
A sortie is cancelled at any time due to weather	Yes	Yes	Prior to crew show it is a cancel, after crew show, it is a weather abort. Paragraphs 15.5.2.1.3 & 15.5.2.3
A spare aircraft printed on the flying schedule is used in a	Yes	No	Paragraph 15.5.2.1.6
An aircraft in the printed schedule is swapped with an aircraft in another printed line	Yes	No	Paragraph 15.5.2.1.7

An aircraft not printed in the flying schedule is used in a printed line. (excluding aircraft already flown that day such as OCF/FCF, X-Country returns)	Yes	Yes	One deviation is recorded for the added aircraft. The result is the same as adding an aircraft as a spare, then tail swapping it into a printed line. Paragraph 15.5.2.1.2
An aircraft not on the printed flying schedule is added as a spare.	No	Yes	Counts as a FSE deviation even if the aircraft does not fly. This has to be manually done by MMA because there is no required MIS transaction that captures this. Paragraph 15.5.2.1.2
An aircraft not printed in the flying schedule that has flown that day is flown/used in a printed line	Yes	No	Examples include previously flown FCF/OCF aircraft as well as cross country returns. Paragraph 15.5.2.1.6
A ground abort is replaced with another aircraft/spare on the printed schedule	Yes	No	Both the ground abort and spare action will be recorded in MIS. If the replacement aircraft takes-off on time, no deviation is recorded. Paragraph 15.5.2.3.1
A printed aircraft ground aborts and is replaced with an aircraft NOT on the printed schedule and the second aircraft also ground aborts and the original aircraft is fixed, takes off late, and flies the sortie.	Yes	Yes	The original aircraft is recorded as a ground abort and late take-off. The second aircraft is recorded as an “add” and a ground abort. Ground aborts in themselves are not deviations calculated in the FSE rate, but are calculated in the ground abort rate. Paragraphs 15.5.2.1.2; 15.5.2.1.5 & 15.5.2.3.4

15.5.3. Deviation Causes. Deviations will be assigned a primary cause. Deviations will be assigned one of the following causes:

15.5.3.1. Maintenance (MT). Deviations resulting from aircraft discrepancies, unscheduled maintenance, or for actions taken for maintenance consideration. GAA, GAB, and GAC are the cause codes for maintenance ground aborts.

15.5.3.2. Operations (OP). Deviations resulting from operations/aircrew actions, mission changes causing an early/late take-off, or cancellation including substitution/aircrew illness (including short notice aircrew physical/mental disqualification), and over-stressing the aircraft. Operations are also deviations resulting from unit controlled operations factors including those caused by mission/load planning, life support, intelligence, base operations, range scheduling, and passengers.

15.5.3.3. Supply (SU). Deviations resulting from a Partially Mission Capable Supply or Not Mission Capable Supply condition or for late Supply or POL delivery. See AFI 23-101, *USAF Materiel Management*. **Note:** The actual time required for installation will be considered.

15.5.3.4. Higher Headquarters (HHQ). Deviations resulting from a higher headquarters tasking including closing of low level routes/ranges or external customer driven mission change.

15.5.3.5. Weather (WX). Deviations resulting from weather conditions such as sorties cancelled because of severe weather conditions. For example, if an aircraft taxied to the end of runway and the wing commander cancels all flying due to weather, the deviation is a weather abort. Sorties/Aircraft cancelled prior to crew show are weather cancels.

15.5.3.6. Sympathy (SY). Deviations occurring when a flight of two or more aircraft, under the command of a flight leader or instructor pilot are cancelled, aborted, or late due to a cancellation, abort, or delay of one of the aircraft in the flight or a supporting flight. Flights engaged in Dissimilar Air Combat Tactics training that are delayed by the other flight will record the delay as sympathy. Sorties, which are to replace sympathy aborts or cancellations on the same day, will be recorded as sympathy additions. Sorties lost caused by the aircraft's scheduled mated tanker/receiver/mission event will be recorded as sympathy. Examples of mission events are: loss of release times, tanker support, minimum interval take-off causing take-off delay or cancellation, deviations caused by another unit's or command's support should be coded as sympathy deviations. **Note:** Deviations caused by aircraft/missions earlier scheduled lines will be assigned to the cause of the earlier deviation, not sympathy.

15.5.3.7. Air Traffic Control (AT). Deviations resulting from air traffic control problems (for example, flight clearance delays, tower communication failure, conflicting air traffic, runway change, or runway closure).

15.5.3.8. Other (OT). Deviations resulting from unusual circumstances not covered by other causes listed. OT may include:

15.5.3.8.1. Malfunctions, failures, or necessary adjustments to equipment undergoing tests or evaluations associated with Operational Testing and Evaluation, Development Testing and Evaluation, or Initial Operational Testing and Evaluation.

15.5.3.8.2. Unusual circumstances such as bird strikes, damage during air refueling, and unscheduled alert swap out.

15.5.3.9. Utilization Day (UTE). Commander's authorized management cancellations.

15.5.3.10. Exercise, Higher Headquarters (XEH). Deviations resulting from higher headquarters directed exercises, including alarm/force protection conditions.

15.5.3.11. Exercise, Local (XEL). Deviations resulting from wing/unit directed exercises, including alarm/force protection conditions.

15.5.4. Scheduling Exceptions.

15.5.4.1. Adverse Weather. Units may add sorties to the flying schedule to make up for weather losses. Sorties will only be added to the schedule when the planned weather attrition for the month, prorated daily, has been exceeded for that month. The number of sorties added will not exceed the difference between the planned weather attrition and actual weather losses. Sorties added for weather that do not exceed prorated weather attrition, are not included in OP-MT-FSE-Rate. (for example, Planned weather attrition for the month equals 30 sorties. On the 10th O&M day of the month (of 20) a unit's weather losses are already 30 sorties. The unit may add 15 sorties (weather "adds"). The maintenance schedule and the ability of maintenance to support the additional requirements must be carefully considered before adding sorties. Under no circumstances will the number of sorties added for weather exceed the difference between actual weather losses and the prorated expected weather losses for the month.

15.5.5. FSE Computations.

15.5.5.1. Total Sorties Scheduled = Total sorties flown plus (+) cancellations minus (-) Additions (added sorties only).

15.5.5.2. Adjusted-Sorties-Scheduled = Sum of total sorties scheduled (home base, off station or deployed) minus (-) UTE cancellations.

15.5.5.3. Calculated-Deviations = Sum of all deviations (including added aircraft) minus (-) air deviations, aircraft tail swaps, aircraft printed spare actions, ground aborted sorties flown by spare aircraft (on-time), and UTE cancellations/additions.

15.5.5.4. OP/MT-Deviations = Sum of all Calculated-Deviations recorded using Operations_ or Maintenance_ as the deviation cause code (include GAA, GAB and GAC).

15.5.5.5. Overall-FSE-Rate = Adjusted-Sorties-Scheduled minus (-) Calculated-Deviations divided by Adjusted-Sorties-Scheduled times 100.

15.5.5.6. *OP-MT-FSE-Rate = OP/MT-Deviations divided (/) by Adjusted-Sorties-Scheduled times (*) 100

GILBERT J. MONTOYA, SES
Director of Logistics, Engineering and Force
Protection (A4)

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 21 May 2015

Prescribed Forms

There are no prescribed forms for this publication.

Adopted Forms

There are no adopted forms for this publication.

Abbreviations and Acronyms

AA—Air abort

AD—Addition

AI—Air abort IFE

ALD—Aircraft Load Data

ALIS—Autonomic Logistics Information System

ALGS—Autonomic Logistics Global Sustainment

AME—Alternate Mission Equipment

AR—Action Request

ARA—Aircraft Return Action

ASC—Air System Contractor

AT—Air traffic control

AVDO—Aerospace Vehicle Distribution Officer

AWBS—Automated Weight and Balance System

BOS—Before Operations Servicing

CMMS—Computerized Maintenance Management System

CRM—Customer Relationship Management

CX—Cancellation

DIT—Data Integrity Team

EEL—Electronic Equipment Log

EL—Early landing

ET—Early take-off

FCF—Functional Check Flight

FE/IFE—In-Flight emergency

FSE—Flying Scheduling Effectiveness
GA—Ground Abort
GAA—Ground abort, before engine start, maintenance
GAB—Ground abort, after engine start, before taxi, maintenance
GAC—Ground abort, after taxi, maintenance
GFE—Government Furnished Equipment
GFM—Government Furnished Material
HAZMAT—Hazardous Material
HRC—Health Reporting Code
HIT—Health Inspection Task
HHQ—Higher headquarters
HQ—Headquarters
IAT—Individual Aircraft Tracking
ICAO—International Civil Aviation Organization
IFF—International Friend or Foe
IFS—Industrial and Financial System
IOS—Interim Operational Servicing
IPP—Integrated Power Plant
JDL—Joint Strike Fighter Data Library
JPO—Joint Program Office
JTD—Joint Tech Data
LCN—Logistics Control Number
LL—Late landing
LT—Late take-off
MEFL—Minimum Essential Function List
MEL—Minimum Essential Level
MT—Maintenance
NIE—Normally Installed Equipment
OCF—Operational Check Flight
O&M—Operation & Maintenance
OEM—Original Equipment Manufacturer
OMS—Offboard Mission Support

OP—Operations
OT—Other
P&W—Pratt & Whitney
PAIR—Production Aircraft Inspection Requirement
PBL—Performance Based Logistics
PEB—Pre-Expended Bin
PHM—Prognostics and Health Management
PMA—Portable Maintenance Aid
PMD—Portable Maintenance Device
POS—Post Operations Service
PS—Propulsion System
PSC—Propulsion System Contractor
PS&D—Plans Scheduling and Documentation
QA—Quality Assurance
RLE—Remaining Life Estimate
SAM—Signature Assessment Module
SCM—Supply Chain Management
SE—Support Equipment
SEMM—Support Equipment Maintenance Matrix
SHM—Squadron Health Management
SOI—Sustainment Operating Instruction
SOU—Standard Operating Unit
SP—Spare
SSI—Supplemental Servicing Inspection
SU—Supply
SWP—Scheduled Work Package
SY—Sympathy
TS—Tail number swap
TCTD—Time Compliance Technical Directive
TTM—Time to Maintenance
TUR—Track Usage Record
UTE—Utilization Day

WO—Work Order

WRM—War Reserve Material

WWM—Wing Weapons Manager

WX—Weather

XEH—Exercise higher headquarters

XEL—Exercise local

ZFMP—Zero Fuel Mass Properties

Attachment 2

EXAMPLE AR ROUTING SCENARIOS

A2.1. Example AR scenario where first level RSP submits AR to ALGS.

A2.1.1. Contractor maintenance personnel discovers a broken nut plate that requires drilling. During the repair process the drill bit fails and creates a scratch in the aircraft panel. JTD is not available to repair the damaged panel. AR is drafted for repair procedures and submitted by initiator to OSP for review. OSP reviews the AR, annotates comments, approves AR and forwards to RSP. RSP reviews the AR, annotates comments, approves the AR and forwards to ALGS. AR Review Team is not organized because damage is from a known source and does not have fleet wide implications.

A2.2. Example AR scenario with fleet implications.

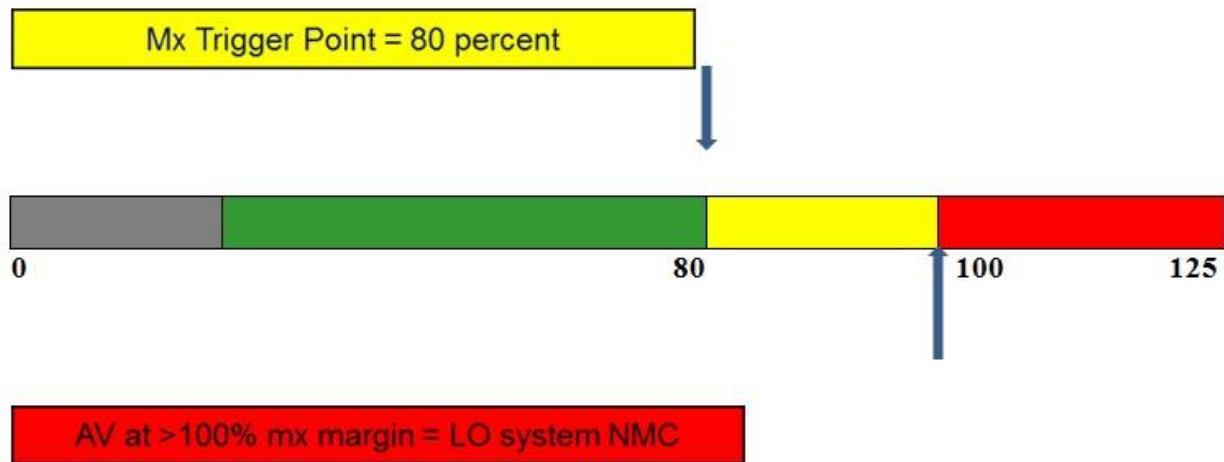
A2.2.1. Maintainer discovers a stress crack on panel 100. JTD does not exist to repair damage on the panel. AR is drafted for repair procedures by and submitted by initiator to OSP for review. OSP reviews the AR, annotates comments, accepts and forwards the AR to first level RSP. First level RSP reviews the AR, annotates comments and determines stress crack may have fleet wide implications. First level RSP informs additional squadrons and starts actions to stand-up AR Review Team. AR Review Team reviews AR and agrees with potential impact to the fleet. First level RSP annotates AR upon completion of AR Review Team review. In this scenario, an AR Review Team review is conducted because the damage is caused by an unknown source and may have fleet wide implications. The first level RSP will ensure all units are aware of potential fleet problem. First level RSP will annotate AR after AR Review Team review is complete.

Attachment 3

LO HEALTH ASSESSEMENT SYSTEM (LOHAS) MARGIN DEFINITION

A3.1. The Maintenance Margin Used (MMU) or “gas gauge” below ([Figure A3.1](#)) shown in LOHAS displays the residual signature used by defect repairs, the defect impacts, and the current signature status of the aircraft, based upon Effects of Repair (EoR) and Effects of Defects (EoD) data that resides within the SAM. It depicts the maintenance margin used to determine the mission capable status for the aircraft LO system.

Figure A3.1. LOHAS Maintenance Margin Used or “Gas Gauge”.



A3.1.1. The LO margin for each aircraft is determined via the Outer Mold Line (OML) inspection in concert with LOHAS. An aircraft is fully mission capable for the LO system when the LOHAS margin is less than 100 percent. LO margin reduction is required when the maintenance margin is equal to or greater than 100 percent. Utilize the Defect Prioritization Report within the LO Maintenance Management Module (LO3M) to determine which defects, if repaired will return the LO system to a fully mission capable status. **Note:** A depleted (NMC) LO system does not render an aircraft unflyable.

A3.1.2. Manage LO maintenance by taking advantage of opportunistic downtime or scheduling LO margin reduction when the maintenance margin approaches the 80 percent trigger point. In order to effectively manage/control LO signature margin growth, fleet LOHAS margin averages should be maintained at or below 80 percent.

Attachment 4

SAMPLE MICAP VERIFICATION WORKSHEET

Figure A4.1. Sample MICAP Verification Worksheet.

Tail number	NOUN	Part Number
Requisition ID	Quantity	Priority
Job Control Number	IFS Purchase Order#	IFS Customer Order # 1
Maintainer Who Ordered Part	Pro Super Signature	Pro Super Print

CANN Action

CANN From Aircraft & LCN	CANN To Aircraft & LCN
CANN From JCN	CANN To JCN
Pro Super Signature	Pro Super Print

Supply Checklist

Checklist Item	Yes	No	N/A
Is the warehouse balance zero?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are assets available in TNB?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has base repair capability been verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you document MICAP on Supply Status Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cancel MICAP

Cancellation Code	Pro Super Signature	Pro Super Print
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MICAP Cancellation Codes

1-RECEIVED FROM ALTERNATE F35 SOURCE

2-RECEIVED FROM GOVT SERVICE/OTHER SERVICES (GFE/DLA)

3-CANNIBALIZATION ACTION

4-RECEIVED FROM BASE ASSETS (DSP/BENCHSTOCK/PEB)

5-ALT P/N SATISFIED REQUIREMENT

6-SUSTAINMENT DIRECTED (would include IM directed cancellations and requirements we would not track such as TCTD, time change, mod etc.)

7-OTHER

9-REPORTED/ORDERED IN ERROR BY MAINT

0-ADMINISTRATIVE/CMMS ERROR/CONFIGURATION

Comments

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